

RANUNCULUS CYMBALARIA PURSH
VAR. ALPINUS HOOK.

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Ranunculus cymbalaria Pursh var. *alpinus* Hook. was described in 1829 by Sir Wm. J. Hooker from a specimen "found by Mr. Drummond upon the Rocky Mountains" (Hooker, 1829, p. 12). It was distinguished by its small size, three-toothed leaf apices, and single-flowered scapes. Hooker felt that this variety was so close to *R. halophilus* Schlecht. that he reduced Schlechtendal's species to synonymy under var. *alpinus*. The validity of this variety has been under discussion since the early part of this century. Fernald (1914, p. 162) suggested that this variety "seems to be merely a dwarfed extreme such as can be found in unfavourable habitats nearly throughout the range." This doubt as to the validity of the variety was also emphasized by Benson (1948, p. 216). He said that "the status of the variety is not wholly beyond question, since leaves of var. *alpina* [*alpinus*]¹ type develop at the beginning of growth at each of the nodes of the stolons of the intermediate forms between var. *typicus* [*cymbalaria*]¹ and var. *alpina* [*alpinus*]."¹ He also suggested that "transplant experiments would be significant." Variety *alpinus* was reported by Benson (1948) from Alaska to Newfoundland in North America and var. *cymbalaria* was reported from a similar range and farther south.

Living specimens of var. *alpinus* were collected from brackish estuaries at Main Brook on the Northern Peninsula and Stephenville Crossing in Newfoundland. All of the leaves of these specimens were small (average 7 mm long by 6 mm broad) and the petals were about 2.5 mm long. They were grown under the same environmental conditions in the greenhouse at the University of Alberta, Canada, with collections of *Ranunculus cymbalaria* var. *cymbalaria* from Alberta. All of the plants were washed free of soil after collection in the field, potted, and grown

¹Benson, 1954. p. 363.

under the same conditions of soil (2 loam: 1 peat: 1 sand), light (daylight), temperature (20°C day, 17°C night), and humidity (not controlled). The Newfoundland collections grew as large or larger than the Alberta collections in all respects. The leaves were an average of 18 mm long by 14 mm broad and the flowers were of the same size as var. *cymbalaria* (petals about 4.5 mm long). Average measurements of Albertan var. *cymbalaria* in the greenhouse were: leaves — 17 mm long by 15 mm broad and petals — 4.2 mm long. In the field, the leaves of the Newfoundland specimens were typical of var. *alpinus*. They were only three-toothed at the apex and truncate at the base. After about a year's growth in the greenhouse, these specimens produced leaves that were crenate to the decidedly cordate base, and they were much larger in overall size. There was no indication of reversion to the characters they had under field conditions.

It is, therefore, proposed that *Ranunculus cymbalaria* Pursh var. *alpinus* Hook. be considered a synonym of *R. cymbalaria* Pursh.

Collections used in this study: NEWFOUNDLAND: Main Brook, Northern Peninsula, *Maunder*, Aug. 8, 1971 (ALTA); Stephenville Crossing, *Scott* 1797 (ALTA). ALBERTA: Medicine Hat, *Scott* 1269 (ALTA); Long Lake, *Scott* 1676 (ALTA); Nordegg, *Scott* 1480 (ALTA); Twin Butte, *Scott* 1417 (ALTA); Marwayne, *Scott* 1714 (ALTA); Cold Lake, *Dumais* 5456 (ALTA). Three plants were collected at each site.

LITERATURE CITED

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